

IN THE CLAIMS

Please cancel claims 1-48, all of the claims in the subject U.S. patent application, as filed. Please also cancel claims 1-47 as submitted under Article 34 by KBA on November 11, 2004. Please add new claims 49-100, as follows.

Claims 1-48 (Cancelled)

49. (New) A method for setting a correlation between a duration of a period of a spray dampening unit and a duration of a revolution of a cylinder including:

providing a spray dampening unit having at least one spray nozzle and adapted to deliver a dampening agent in discontinuous flow amounts;

operating said spray dampening unit over a period with a duration and within which said dampening fluid is delivered;

including in said duration of said period, over which said spray dampening unit is operating, a spray nozzle delivery time and a spray nozzle off-time;

providing a cylinder having a circumference receiving said dampening agent from said spray dampening unit during said period in which said spray dampening unit is in operation;

determining a characteristic of said cylinder;

setting said duration of said period over which said spray dampening unit is operating in accordance with said cylinder characteristic; and

applying said dampening agent to said cylinder in accordance with said setting for applying said dampening agent to said cylinder circumference in a complete

dosage and starting at a same location on said circumference no earlier than at each third successive revolution of said cylinder.

50. (New) The method of claim 49 wherein said characteristic of said cylinder is a duration of cylinder revolution.

51. (New) The method of claim 49 wherein said characteristic of said cylinder is a diameter of said cylinder.

52. (New) The method of claim 49 further including applying said dampening agent to said same location on said circumference no earlier than each tenth successive revolution of said cylinder.

53. (New) The method of claim 49 wherein said duration of said period within which said dampening fluid is delivered during operation of said spray dampening unit does not correspond to the duration of the revolution of the cylinder.

54. (New) The method of claim 49 further including fixing said at least one spray nozzle fixed in place with respect to a circumference of said cylinder at least during delivery of said dampening agent.

55. (New) The method of claim 54 further including delivering said dampening agent to said cylinder circumference during rotation of said cylinder.

56. (New) The method of claim 49 further including providing a dampening agent roller and using said dampening agent roller for transferring said dampening agent to said cylinder and providing said cylinder as a forme cylinder.

57. (New) The method of claim 49 wherein at least one of said spray nozzles delivery time and said spray nozzle off-time is variable.

58. (New) The method of claim 49 further including providing said duration of said period within which said dampening fluid is delivered variable.

59. (New) The method of claim 49 further including determining a duration of said revolution of said cylinder; determining said duration of said period within which said dampening fluid is delivered; delivering a first chronological difference between said revolution duration and said period duration; and selecting said chronological difference greater than said spray nozzle delivery time when said period duration is less than said revolution duration.

60. (New) The method of claim 49 including setting said duration of said period within which said dampening fluid is delivered based on a duration of a previous period within which said dampening fluid was delivered by providing a time interval having a lower threshold value formed by a whole number multiple of a duration of said revolution of said cylinder reduced by a duration of said spray nozzle delivering time which next follows said previous period, and an upper threshold value formed by said

whole number multiple of said duration of said revolution of said cylinder which next follows said previous period, said duration of said period within which said dampening fluid is delivered falling outside of an interval having said lower threshold limit and said upper threshold limit when said duration of said period within which said dampening fluid is delivered is greater than said whole number multiple of said duration of revolution of said cylinder which directly precedes said lower threshold value.

61. (New) The method of claim 49 further including a plurality of dampening unit rollers in said spray dampening unit and further including a duration of transport required by at least one further dampening unit roller between its receipt of dampening agent and its transfer to a forme cylinder and further wherein a total time including said duration of said period within which said dampening agent is delivered and said duration of transport is unequal to a whole number multiple of said duration of a revolution of said cylinder.

62. (New) The method of claim 49 further including applying said dampening agent to said cylinder as a layer having a thickness of between 1 μm to 10 μm .

63. (New) The method of claim 57 further including providing at least one of said spray nozzle delivery time, said spray nozzle off-time and their sum for obtaining said correlation between said duration of said period of said spray dampening unit and said duration of said revolution of said cylinder.

64. (New) The method of claim 63 further including setting at least one of said spray nozzle delivery time, said spray nozzle off-time and their sum as a function of said duration of said rotation of said cylinder.

65. (New) The method of claim 63 further including providing said cylinder as a forme cylinder and further providing a dampening unit roller having a diameter different from a diameter of said forme cylinder and further including setting at least one of said spray nozzle delivery time, said spray nozzle off-time and their sum taking into consideration said difference between said forme cylinder diameter and said dampening unit diameter.

66. (New) The method of claim 49 further including starting said duration of said period of said spray dampening unit and said spray nozzle delivery time at the same time.

67 (New) The method of claim 49 further including selecting at least one of said duration of a period of said spray dampening unit and said duration of a period of said cylinder for receiving said dampening agent being at least double said duration of revolution of said cylinder.

68. (New) The method of claim 59 further including providing said chronological difference being no greater than one-tenth of said revolution duration.

69. (New) The method of claim 60 further including providing said interval no greater than one-tenth of said duration of said revolution of said cylinder.

70. (New) The method of claim 59 further including providing said duration of said rotation of said forme cylinder unequal to a whole number multiple of said chronological difference.

71. (New) The method of claim 60 further including providing said duration of said rotation of said forme cylinder unequal to a whole number multiple of said interval difference.

72. (New) The method of claim 49 further including at least one dampening unit roller and using said at least one spray nozzle for delivering said dampening agent to said at least one dampening roller and from there to said cylinder at a contact point with said cylinder.

73. (New) The method of claim 49 further including providing several dampening unit rollers and using a first one of said dampening unit rollers for receiving said dampening agent from said spray nozzle and for transferring said dampening agent to a subsequent one of said dampening unit rollers at a contact point.

74. (New) The method of claim 73 further including providing said several dampening unit rollers having one of differing diameters and durations of revolution.

75. (New) The method of claim 72 further including providing said at least one dampening fluid roller having a diameter less than a diameter of said cylinder.

76. (New) The method of claim 59 further including providing a dampening unit roller having a duration of revolution of said dampening unit roller.

77. (New) The method of claim 60 further including providing a dampening unit roller having a duration of revolution of said dampening unit roller.

78. (New) The method of claim 49 further including providing a range of said duration of said revolution of said cylinder and setting said duration over which said spray dampening unit is operating over at least an upper third of said range.

79. (New) The method of claim 49 further including providing a range of said duration of said revolution of said cylinder and setting said duration over which said spray dampening unit is operating over all of said range.

80. (New) The method of claim 49 further including providing a dampening unit roller and further including a duration of transfer required by said dampening unit roller between its receipt of said dampening agent and its transfer to said cylinder and further wherein a total transfer time including said duration of said period within which said dampening agent is delivered to said dampening unit roller and said duration of transport is unequal to a whole number multiple of said duration of said revolution of

said cylinder.

81. (New) The method of claim 80 further including selecting a time differential between said duration of revolution of said cylinder and said total time being greater than said spray nozzle delivery time when said total time is less than said duration of revolution of said cylinder.

82. (New) The method of claim 80 further including providing said total time as a value lying outside of an interval having a lower threshold value formed by a whole number multiple of said duration of said revolution of said cylinder which next follows said total time and which is reduced by said spray nozzle delivery time, and having an upper threshold formed by a whole number multiple of said duration of said revolution of said cylinder which next follows said total time when said total time is greater than a whole number multiple of said duration of said revolution of said cylinder directly preceding said lower threshold value.

83. (New) The method of claim 49 further including at least one dampening unit roller arranged axially spaced from said cylinder.

84. (New) The method of claim 49 further including operating said at least one spray nozzle for ejecting said dampening agent in a pulse-like manner.

85. (New) The method of claim 49 further including providing a plurality of said spray

nozzles and arranging said plurality of spray nozzles arranged spaced apart from each other in an axial direction of said cylinder.

86. (New) The method of claim 57 further including providing a remote control and using said remote control for varying at least one of said spray nozzle delivery time and said spray nozzle off-time.

87. (New) The method of claim 49 further including providing a program for determining at least one of said spray nozzle delivery time, and said spray nozzle off-time as a function of said value of said diameter of revolution of said cylinder.

88. (New) The method of claim 87 further including providing said program excluding settings not meeting required correlations.

89. (New) The method of claim 87 further including providing said program excluding settings not meeting required correlations.

90. (New) A method for setting a spraying frequency of a spray dampening unit including:

providing at least one spray nozzle;

using said at least one spray nozzle for spraying a dampening agent;

providing a roller;

using said at least one spraying nozzle for applying said dampening agent

to said roller;

determining a characteristic of said roller;

setting a spraying frequency of said spray nozzle as a function of said roller characteristic for avoiding overlaying of said sprayed-on dampening agent, at least for a defined number of subsequent rotations of said roller receiving said dampening agent; and

selecting said defined number of subsequent rotations being at least two.

91. (New) The method of claim 90 further including selecting said characteristic of said roller as a rotational frequency of said roller.

92. (New) The method of claim 90 further including selecting said characteristic of said roller as diameter of said roller.

93. (New) The method of claim 90 further including providing a plurality of spray nozzles spaced in an axial direction of said roller.

94. (New) The method of claim 90 further including setting said spraying frequency for avoiding overlap of said sprayed-on dampening agent for two subsequent rotations of said roller.

95. (New) The method of claim 90 further including setting said spraying frequency for avoiding overlap of said sprayed-on dampening agent for five subsequent rotations

of said roller.

96. (New) The method of claim 90 further including setting said spraying frequency for avoiding overlap of said sprayed-on dampening agent for ten subsequent rotations of said roller.

97. (New) The method of claim 90 further including setting said spraying frequency for avoiding overlap of said sprayed-on dampening agent for an indeterminate number of subsequent rotations of said roller.

98. (New) The method of claim 90 further including using said spray nozzle for spraying said dampening agent along a circumference of said roller.

99. (New) The method of claim 49 further including using said spray dampening agent in an offset rotary printing press.

100. (New) The method of claim 49 further including using said spray dampening agent in an offset rotary printing press.